



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: A. Stoyanov et al. Attorney Docket No.: WEYE121925/25324

Application No.: 10/815,143 Art Unit: 1731 / Confirmation No: 8224

Filed: March 31, 2004 Examiner: D.R. Cordray

Title: BLEACHED POLYACRYLIC ACID
CROSSLINKED CELLULOSIC FIBERS

DECLARATION OF KATHY A. WELCH PURSUANT TO 37 C.F.R. § 1.131

Seattle, Washington 98101

March 3, 2006

TO THE COMMISSIONER FOR PATENTS:

I, Kathy A. Welch, declare as follows:

1. I am employed by Weyerhaeuser Company as a Scientist.
2. I have read and am familiar with U.S. Patent Application No. 10/815,143 ("the '143 application").
3. I have read and am familiar with U.S. Patent Application Publication No. US 2003/0208859 A1 ("the Neogi reference") that published November 13, 2003.
4. Prior to the publication date of the Neogi reference, I conducted APPL Trial T-76 preparing bleached polyacrylic acid crosslinked fibers under the direction of Scott Stephens, Ph.D., an inventor of the subject matter claimed in the '143 application. The following describes the pilot line runs that provided bleached polyacrylic acid crosslinked fibers.
 - a. Southern pine kraft pulp (CF416) was crosslinked with polyacrylic acid (ACUMER 9932) using sodium hypophosphite (SHP) as a crosslinking catalyst as set forth on pages 78 and 79 of my laboratory notebook (**Exhibit A** and **Exhibit B**, respectively, attached to this declaration).
 - b. Polyacrylic acid crosslinked fibers were treated with a bleaching agent that was either hydrogen peroxide or a combination of hydrogen peroxide and sodium

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hydroxide. The target bleaching agent treating conditions for the trial, Runs A-H, were as set forth on page 78 of my laboratory notebook (**Exhibit A**, Remoisturizing Solutions Composition). Runs A, B, and E were control runs: Run A, no hydrogen peroxide or sodium hydroxide treatment; Run B, hydrogen peroxide treatment without sodium hydroxide; and Run E, sodium hydroxide treatment without hydrogen peroxide.

c. Runs A-H had the process parameters as set forth on page 83 of my laboratory notebook (see **Exhibit C** attached to this declaration) and produced polyacrylic acid crosslinked fiber samples.

d. For each run, five (5) samples were taken (see A1-A5, B1-B5, C1-C5, D1-D5, E1-E5, F1-F5, G1-G5, and H1-H5 in **Exhibit C**). Each run was sampled at the baler feed and the samples were taken at approximately two minute intervals during each run.

e. Hunter *L*, *a*, and *b* values were measured for Samples A1-A5 through H1-H5. These values were measured initially (i.e., Day 0), after one day (i.e., Day 1), and after fourteen days (i.e., Day 14). The results were tabulated as set forth on page 84 of my laboratory notebook (see **Exhibit D** attached to this declaration).

f. The Hunter *L*, *a*, and *b* values for Samples A-H in Table 2 of the '143 application are the average Hunter *L*, *a*, and *b* values from Samples A1-A5 through H1-H5, respectively.

g. The Whiteness Index (WI) values in Table 2 of the '143 application were calculated from the Hunter *L* and *b* values in Table 2 using the equation: WI = *L* - 3*b*.

5. The bleached polyacrylic acid crosslinked fibers prepared from polyacrylic acid crosslinked fibers treated with a bleaching agent as described above have a Whiteness Index greater than polyacrylic acid crosslinked fibers that were not treated with a bleaching agent.

6. All of the polyacrylic acid crosslinked fibers described above were prepared prior to November 13, 2003. In accordance with accepted Patent Office practice, the dates in my laboratory notebook pages presented in Exhibits A-D have been redacted.

7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,

Date: 3/3/06

Kathy A. Welch
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GER:md

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